Do doctors read forms? A one-year audit of medical certificates submitted to a crematorium

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SUMMARY

To determine the thoroughness and accuracy with which medical certificates for cremation are completed, a record was made, during normal processing of the documents, of the number of questions that were not answered or answered wrongly, or in which clarification was required.

Of 835 sets of forms only 346 (41%) were completed sufficiently accurately for the cremation to proceed without further enquiry. Junior doctors contributed the most errors but general practitioners and consultants also contributed large numbers of errors.

Doctors ought to be far more accurate and thorough in completing cremation certificates than were those audited here. The results cast doubt on the reliability of information supplied on other forms. In view of the high frequency of poorly completed forms, review by a medical referee remains essential.

INTRODUCTION

The last service that doctors can offer their patients is to provide a certificate of death with a reasonably accurate diagnosis. The Cremation Acts require two doctors, one of whom must have been registered more than 5 years, to give further certificates with detailed answers to a series of additional questions about the nature of the death and the circumstances surrounding it. In the light of this information the medical referee, upon the submission of an application form and a certificate that the death has been registered, must be satisfied that the cause of death has been definitely ascertained and that no reason exists for further enquiry.

In 1982 one of us reported a review[1] of the work of a medical referee undertaken between 1975 and 1981. About 17% of medical forms raised queries that required more follow-up. We decided to conduct a one-year audit in another crematorium in the north of England to see whether matters had changed during the intervening 20 years.

METHODS

During the calendar year 1996 the answers to all the statutory questions on the medical forms were recorded without any personal identifying details. The information was transferred to a Microsoft access database for detailed analysis. Entries on the database were rechecked against the original hard copy records.

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RESULTS

835 first medical certificates (form B) and 827 confirmatory certificates (form C) were available for analysis. This discrepancy is explained by 3 cases in which a hospital necropsy was carried out and by 5 stillborn babies. Confirmatory certificates were not required in these cases.

In 346 cases the questions on both forms were accurately completed and no further enquiry was necessary by the medical referee. There were 457 forms B containing at least one query. Of these, 110 contained two queries and 36 contained three or more. Form C was more accurately completed with a total of 16 forms containing one query, one with two errors and one with a great number of errors. A detailed tabulation of the individual questions in form B is shown in Table 1 and tabulations for form C are shown in Table 2.

Type of doctor

We categorized 'junior doctors' as those serving at house officer, senior house officer, or registrar level. A small number of forms B were signed by a consultant; senior registrars showed an identical pattern and are therefore included among them. General practitioners were recorded

Table 1 **Medical certificate form B—errors recorded**

	Junior doctors				*General practitioner*				*Consultants*				*Other doctors*				*Total*			
	N	***Q***	***W***	***Total***	***N***	***Q***	***W***	***Total***	***N***	***Q***	***W***	***Total***	***N***	***Q***	***W***	***Total***	***N***	***Q***	***W***	***Total***
Identification details	11	1	5	17	2	0	3	5	2	0	0	2	0	0	0	0	15	1	8	24
1 What was the time of death?	0	2	4	6	0	0	1	1	0	0	0	0	1	0	0	1	1	2	5	8
2 What was the place of death?	0	1	0	1	0	3	0	3	0	0	0	0	0	0	0	0	0	4	0	4
3 Are you a relative of the deceased?	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4 Have you any financial interest?	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
5a Were you the ordinary doctor?	1	3	9	13	0	4	2	6	0	0	0	0	0	0	29	29	1	7	40	48
5b How long?	1	4	9	14	3	7	1	11	0	0	0	0	0	0	30	30	4	11	45	60
6a Did you attend deceased before death?	2	3	2	7	0	8	0	8	0	0	0	0	0	1	0	1	2	12	2	16
6b How long?	2	55	1	58	1	41	1	43	0	0	0	0	0	5	0	5	3	101	2	106
7 When did you last see the deceased?	12	79	1	92	10	91	2	103	0	7	1	8	0	6	0	6	22	183	4	209
8a Have you seen the body after death?	3	3	0	6	3	13	0	16	0	0	0	0	0	0	0	0	6	16	0	22
8b How soon?	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0	0	2	0	2
8A Has a post-mortem been done, etc.?	0	0	1	1	0	0	2	2	0	0	0	0	0	0	0	0	0	0	3	3
10 What was the mode of death?	0	2	0	2	0	5	0	5	0	0	0	0	0	0	0	0	0	7	0	7
10 What was its duration?	2	3	0	5	3	2	0	5	0	0	0	0	0	0	0	0	5	5	0	10
11 Are these observations your own?	0	3	0	3	1	2	0	3	0	0	0	0	0	0	0	0	1	5	0	6
12 Did the deceased undergo an operation?	0	5	1	6	0	8	0	8	0	2	0	2	0	0	0	0	0	15	1	16
13 Who nursed patient in final illness?	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14 Who was present at death?	1	1	0	2	1	2	0	3	0	0	0	0	1	0	0	1	3	3	0	6
15 Any doubt about cause of death?	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	2
16 Any suspicion of violence?	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Any suspicion of poison?	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Any suspicion of neglect?	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17 Do you think a post-mortem is necessary?	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18 Have you given certificate of death?	0	3	0	3	0	0	1	1	0	0	0	0	0	0	0	0	0	3	1	4
Details of pacemaker	17	6	1	24	11	1	1	13	0	0	0	0	0	0	0	0	28	7	2	37
Details of contact telephone	55	2	3	60	13	0	0	13	1	0	0	1	0	0	0	0	69	2	3	74
Form not dated	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	2	0	0	2
Totals	108	178	37	321	50	188	14	252	3	10	1	14	2	12	60	74	163	388	117	668

N=no answer; Q=answer requiring clarification with doctor; W=wrong answer

Table 2 **Medical certificate form C—errors recorded**

	Consultants				*General practitioner*				*Other doctor*				*Total*			
	N	***Q***	***W***	***Total***	***N***	***Q***	***W***	***Total***	***N***	***Q***	***W***	***Total***	***N***	***Q***	***W***	***Total***
1 Have you seen the body?	0	1	0	1	1	0	0	1	0	0	0	0	1	1	0	2
2 Have you carefully examined the body?	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1
3 Have you carried out a post mortem?	1	0	0	1	3	0	0	3	0	0	0	0	4	0	0	4
4 Have you spoken to the doctor who signed form B?	1	0	0	1	0	4	0	4	1	0	0	1	2	4	0	6
5 Have you spoken to any other doctor?	0	0	0	0	1	1	0	2	0	0	0	0	1	1	0	2
6 Have you spoken to the nurse?	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	1
7 Have you spoken to the relatives?	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	1
8 Have you spoken to anyone else involved?	1	0	0	1	1	1	0	2	0	0	0	0	2	1	0	3
Diagnosis	0	0	0	0	0	1	5	6	0	0	0	0	0	1	5	6
Diagnosis different on forms B and C				3				4				0				7
Date, qualifications and contact telephone	17	1	7	25	2	3	6	11	4	4	7	15	23	8	20	51
Total	20	3	7	33	10	10	11	35	5	4	7	16	35	17	25	84

See Table 1 for key to abbreviations

in a separate group. All the remaining doctors within the hospital or outside it were categorized 'other'. In form C doctors were categorized either as consultant (including senior registrar), general practitioner or, again, 'other'. We recorded names of general practitioners to identify whether any systematic errors were occurring. With the exception of one 'other' doctor who consistently claimed to be the patient's normal medical attendant when he clearly was not, no such consistent errors occurred. We were however surprised to note that, of the 414 forms signed by general practitioners, 115 (28%) had been signed by just two general practitioners. On 26 occasions (6.3%) the two doctors signed the forms as a 'pair'. No other doctor (or pair of doctors) came anywhere near these figures. Table 3 provides an analysis of errors by type of doctor. General practitioners had the highest proportion of satisfactorily completed forms.

Form B

In 457 of the 835 initial medical certificates there was a total of 684 errors: 163 questions contained no answer; in 117 the answer was wrong; and in a further 388, further follow-up by the medical referee or his staff was necessary. A total of 290 forms contained a single error or query; 126 showed two errors (often related to one another) and 41 forms contained three or more errors and queries.

The commonest question not completed on form B was question B7 ('When did you last see the patient alive?') and this question also raised the most queries. Question B6b ('How long did you attend the deceased?') was the one most commonly completed wrongly. The commonest initial cause of death was bronchopneumonia, sometimes without further elaboration. The commonest definitive cause of death was cancer.

In September 1976 the mercury zinc batteries in a pacemaker exploded during the cremation process, seriously damaging a cremator. As 'an interim measure' medical referees were asked to seek information about such devices. In 37 cases (4.5%) the information was not supplied.

If the practice of the 'other' doctor cited above is discounted, junior doctors were those most likely not to record an answer and they accounted for the greatest proportion of errors, followed by consultants. General practitioners had the lowest proportion of errors.

Form C

The doctor issuing form C certifies that s/he has 'carefully examined' form B. It is puzzling that the doctor giving the confirmatory certificate apparently failed to notice that questions were unanswered, or wrong, in no fewer than 280 forms. Most medical referees insist that questions 1, 2 and 4 on form C should invariably be answered 'yes'. The Scottish Home and Health Department[2] insists that at least one of these answers should be in the affirmative. The commonest question left blank was question C3 ('Have you performed a post mortem?'); and the commonest raising a query was C4 ('Have you discussed the case with the doctor who signed form B?'). None of the questions appeared to have been answered wrongly. There were many fewer queries on form C of any type. Nevertheless, 78 forms contained a total of 84 queries. One form contained two errors and two contained three or more errors.

Serious diagnostic queries

The medical referee is required by the Cremation Acts to be 'satisfied that the cause of death has been definitely ascertained'. On 27 forms there was a diagnostic query which the referee was able to resolve in consultation with the doctors concerned. In a further 4 forms the diagnosis was wrong although the error was usually corrected on the

Table 3 **Analysis of errors by type of doctor**

	Form B			Form C		
	Number with an error	Total	%	Number with an error	Total	%
Junior doctors	228	356	64			
General practitioners	184	413	44.5	32	445	7
Consultants	10	15	66	31	268	11.5
Other doctors	35	50	70	15	113	13
Other doctors (adjusted*)	6	50	12			
Total	457	834	54.8	78	826	9

*Excludes a consistent error—see text

confirmatory certificate. In addition, on 7 occasions 'dementia' was given as the only cause of death and in 13 cases 'old age' was the only diagnosis. Although the Office of National Statistics discourages the diagnosis 'old age', it still allows it in exceptional circumstances[3]. In 51 cases (6.1%) the medical referee was required, therefore, to exercise a professional judgment about the reliability of the cause of death. These cases present the greatest problem for the referee. Should s/he assume that the certifying doctors have arrived at a satisfactory cause of death but have just failed to record it? Surveys of death certificates do not encourage such confidence[4]. Follow-up of diagnostic queries may provide reassurance. During the survey, however, two doctors told the referee that they were unable to identify a specific cause of death and insisted that 'old age' was more than adequate. The alternative is to exercise the right provided under the Acts to require that a post mortem examination be performed (no explanation need be given). The Brodrick Committee[5] noted that necropsy rates were generally low but extremely variable between crematoria. Clearly a necropsy at such a late stage is very disruptive of the funeral arrangements.

During the year 7 cases (0.8%) were referred for necropsy and in 4 of these the cause of death was found to be different from that certified. Of the 7 cases, one patient had not been seen by the attending physician for 150 days and in another there were doubts whether the doctor had ever attended the deceased. One had died immediately after operative interference and was referred at the request of the coroner. Another was presented to the crematorium as 'fetal remains' but was found to be both a live birth and a neonatal death. In 2 cases the diagnosis was queried by the medical referee. In the final case there were different diagnoses on forms B and C with each doctor insistent upon his own diagnosis.

DISCUSSION

The Cremation Society was established in 1874 and the first cremation is believed to have taken place about 1884 at Woking[6]. The first Act to regulate the procedures was passed in 1902. Since then, cremation has become the commonest mode of disposal. There is very little information about the work undertaken by medical referees at crematoria. The Brodrick Committee[5], set up after a series of medical articles on concealed homicide[7], concluded that the work of crematorium referees was done in a very variable way and that medical referees and the formalities in respect of cremation should be replaced by a proposed new death certification process. This present survey, like the earlier one[1], clearly shows that a recommendation to abolish the office of medical referee is totally mistaken. It adds to the concerns raised by the British Medical Association at the time[8]. It also shows that the problems associated with cremation have not improved with time. On the contrary, the efficiency of the process has decreased greatly over the intervening 25 years. James and Bull[4] suggested that all death certificates should be reviewed by a medically qualified person before registration, and the fact that little more than a third of medical forms arrive in the office in a fit state to be processed indicates that careful supervision is essential. Queries about the accuracy of the medical documentation increased almost fivefold between the two surveys.

We are not aware of any quantitative surveys of the work of crematorium referees, other than that undertaken by one of us[1]. There are only eight English-language references to cremation since 1966. The Scottish Home and Health Department undertook a random survey of certification and drew attention to several questions which were often answered unsatisfactorily[2]. No quantification was provided, however. From time to time semi-anecdotal papers appear[9]. Gordon[10] reviewed the first 1000 forms he signed at Leatherhead (Surrey) but it is not entirely clear whether this total also included cremations by the coroner's certificate (form E). He recorded a total of 37 cases where 'further enquiries were made'.

An overhaul of existing procedures is long overdue: the wording of the medical forms is antiquated; doctors seem not to pursue their responsibilities as carefully as they once did; the decline in hospital necropsy has devalued interest in the precise cause of death; and there has been a gradual transfer of responsibility to coroners working from locally determined rules without any feedback to the doctors involved. The sad history of the Brodrick Committee, which took 7 years to report and whose proposals have, in practice, largely been ignored, is a timely reminder to concentrate on this circumscribed area.

Meanwhile the whole system of cremation gradually declines into crisis. New ideas for the improvement of death certification[11] should be explored. The need for the Home Office to give clearer central direction and to use its inspectorial powers more creatively is even more urgent than when such action was advocated 15 years ago[1]. In the earlier survey 13.7% of medical certificates showed evidence that a necropsy had been done. In the present study the figure has slumped to 0.7%. Discrepancies between clinical causes of death and necropsy findings are well documented[12] yet the rate of hospital necropsy continues to decline. Some have argued that a necropsy rate of at least 35% is necessary for clinical audit[13]. Since most necropsies are now performed at the request of the coroner it is important for the results of these examinations to be fed back into the death registration process, if not to the hospital staff[14]. Turner and Raphael[15] consider that feedback to the relatives is an important component of the

investigatory process. Maingay[16] pointed out more than 20 years ago that the crematorium referee was failing in his statutory duty if he did not obtain information from the coroner's necropsy. His comments were ignored and many referees still have no access to such details.

We believe that 'old age' as a cause of death is meaningless. Most elderly people have a definable pathological condition likely to lead to death. Where death occurs without such a condition or the condition does not seem to be a major factor in the dying process, further investigation is almost certainly justified if the risk of concealed homicide is to be reduced. Robertson[17] found that the term was most likely to be used after age 77 years although he found cases as young as 69 years. Similarly, whilst we accept the view of Newens *et al.*[18] that dementia is likely to be under-recorded on death certificates, we find it difficult to accept that dementia alone, without any other clinical condition, can be the only cause of death.

We return to the key issue in this survey—the poor level of recording on these statutory documents. Does it matter? Quite apart from the ethical issue of whether doctors should accept money for work that they have not done, there are two major concerns. First, it seems to indicate a general belief among doctors that death certification is not a particularly important task. Secondly, if doctors fail to complete statutory documents which contain 'prompts' to indicate the expected answer, there must be doubt about the way they complete forms less accessible to audit.

It is usual to conclude that further and better education should be provided[19]. In the words of Maudsley and Williams[20], however, 'There is a need for reorientated thinking rather than just urging more education'. Everything possible has been done within the existing statutory constraints to help doctors complete the forms. A more radical solution might be to withhold payment until the crematorium referee has given authority. In the final analysis, however, our conclusion would be to advise the doctors simply to read the questions and to complete all the answers as fully as they are able.

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